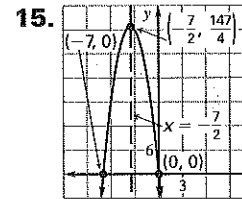
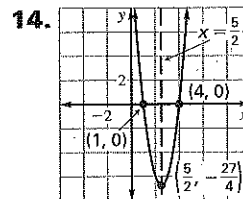
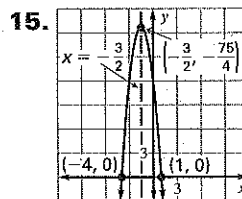
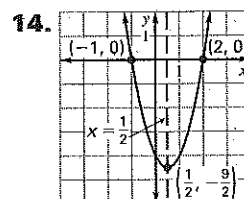
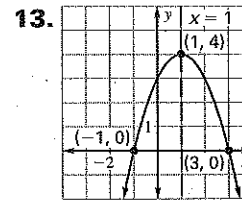
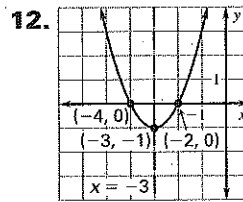
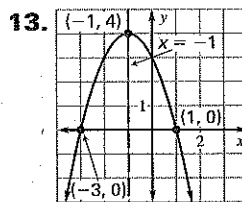
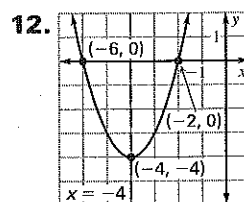
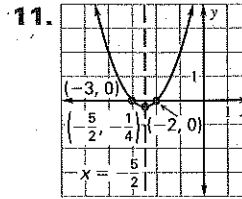
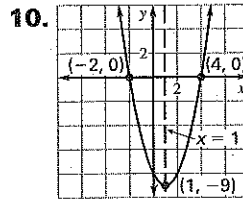
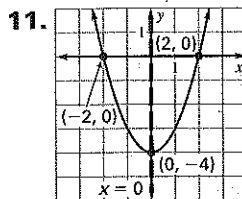
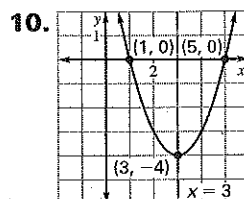
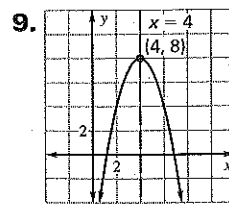
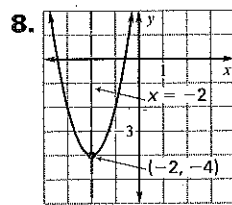
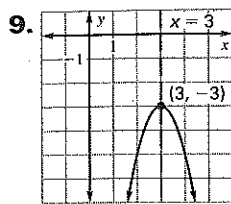
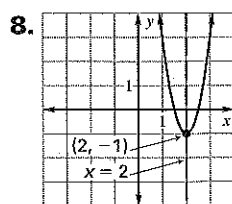


Lesson 4.2, continued



16. $y = 2x^2 - 4x + 3$ 17. $y = -x^2 - 6x - 4$

18. $y = 3x^2 - 12x + 5$ 19. $y = x^2 - 4x + 3$

20. $y = 2x^2 + 10x + 8$

21. $y = -3x^2 - 3x + 18$

22. minimum, 1 23. maximum, 5

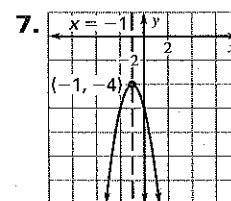
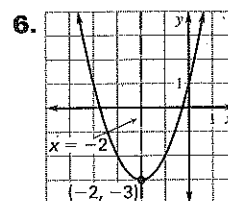
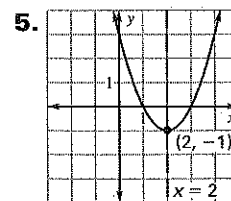
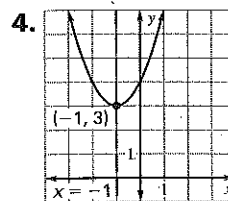
24. minimum, -7 25. minimum, -1

26. minimum, -8 27. maximum, 25

28. 280 29. 29.4

Practice Level B

1. C 2. B 3. A



16. $y = x^2 - 4x + 10$ 17. $y = -2x^2 - 4x + 1$

18. $y = 3x^2 - 18x + 15$ 19. $y = x^2 - 6x + 8$

20. $y = 4x^2 + 12x + 8$

21. $y = -3x^2 + 3x + 18$

22. minimum, 3 23. maximum, -4

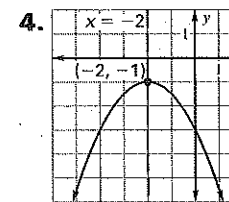
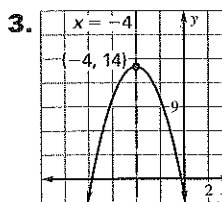
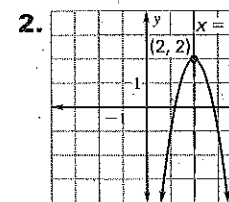
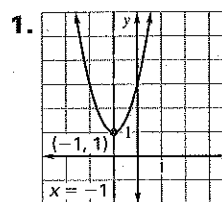
24. minimum, -3 25. minimum, -4

26. minimum, -2 27. maximum, $\frac{25}{4}$

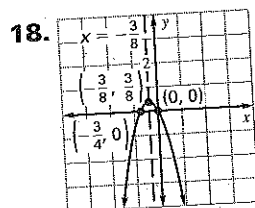
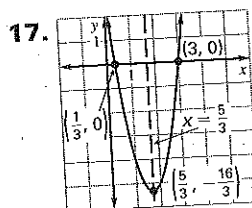
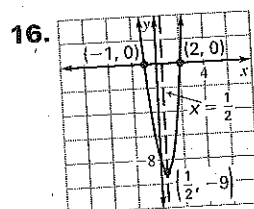
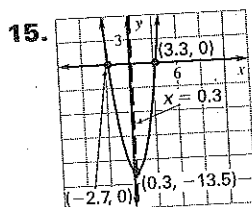
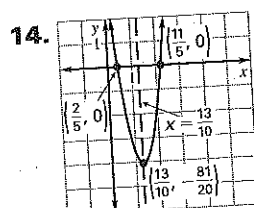
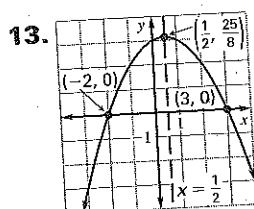
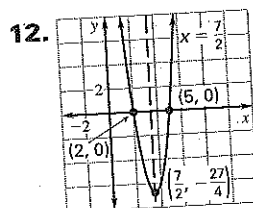
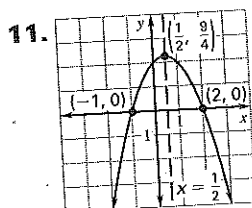
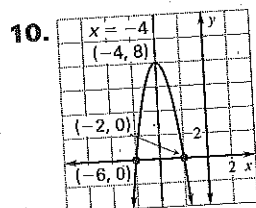
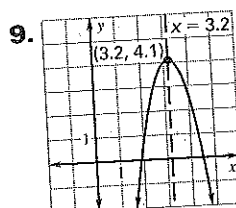
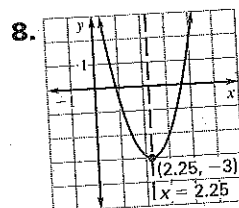
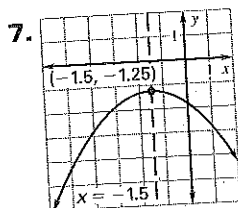
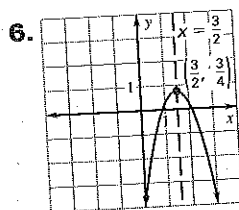
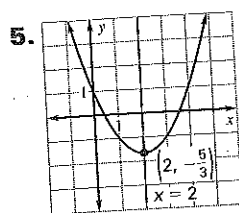
28. As a increases, the graph becomes more narrow and the vertex moves down.

29. 260 30. 16.9

Practice Level C



Lesson 4.2, continued



19. $y = 3x^2 - 6x + 8$

20. $y = -\frac{5}{4}x^2 - 10x - 5$

21. $y = \frac{4}{3}x^2 - \frac{16}{3}x + \frac{1}{3}$

22. $y = \frac{5}{2}x^2 - 20x + 30$

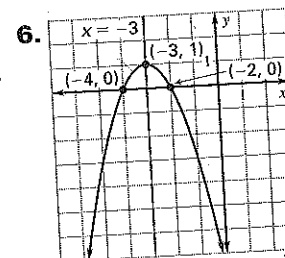
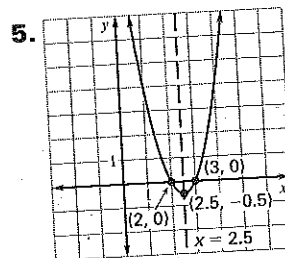
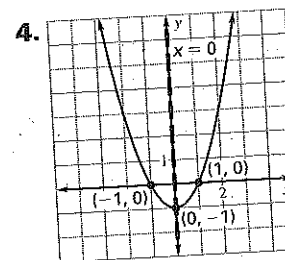
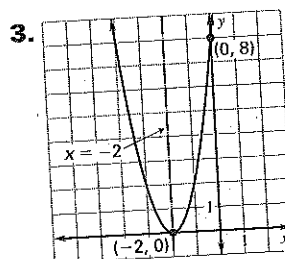
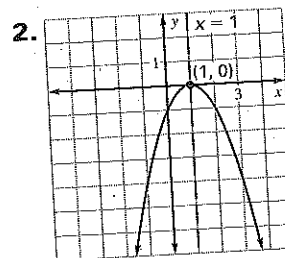
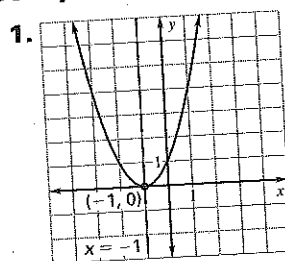
23. $y = 3x^2 + \frac{11}{2}x + \frac{3}{2}$

24. $y = -2.5x^2 - 9.75x + 16.9$

25. $p = 4\left(n + \frac{1}{2}\right)\left(n + \frac{3}{2}\right)$

26. $y = -0.001x(x - 300)$ 27. higher

Study Guide



7. 3000 ft 8. $x^2 + 2x + 1$ 9. $-x^2 + 2x - 1$

10. $2x^2 + 8x + 8$ 11. $x^2 - 1$

12. $2x^2 - 10x + 12$ 13. $-x^2 - 5x - 6$

Problem Solving Workshop: Worked Out Example

1. about 0.42 sec; 0.21609 m 2. 10 ft, 5 ft

3. 35 ft, 11.025 ft 4. 46 ft, 13.754 ft

Challenge Practice

1. True. A quadratic function whose vertex lies on the x -axis has only one x -intercept. 2. False. The graph is the parabola $y = ax^2$ translated horizontally h units and vertically k units.

3. False. When a quadratic function is written in vertex form $y = a(x - h)^2 + k$, it is obvious from the form that the axis of symmetry is $x = h$.